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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,962	07/15/2003	Thomas Lich	10191/3096	9704

26646 7590 04/27/2005

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EXAMINER

ENGLISH, PETER C

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/620,962	Applicant(s) LICH ET AL.	
	Examiner Peter C. English	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

12, shown in Fig. 3b.

2. Unless the specification is amended to include the omitted reference numeral, corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to because:

At page 2, line 14, "Figure 3 shows" should be "Figures 3a and 3b show".

At page 2, line 33, "suspension" should be "frame". See page 6, lines 2-4.

At page 5, line 23, "switched in parallel" is confusing and appears to be inaccurate.

At page 6, line 1, "in representation a, Figure 3" should be "Figure 3a".

At page 6, line 2, "b" should be "3b".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 1, at line 2, "its conductivity" lacks proper antecedent basis. The examiner suggests: at line 2, delete "its".

In claim 8, at lines 1-2, "its conductivity" lacks proper antecedent basis. The examiner suggests: at line 2, delete "its".

Claim 8 is indefinite because it purports to be a "method" claim, but fails to recite a series of method steps. A claim reciting a single means-plus-function or step-plus-function is unduly broad and therefore indefinite.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Demachi et al. (JP 09136597). Demachi et al. discloses an impact sensor comprising a conductive rubber layer 24 whose electrical resistance decreases as it is compressed (see the abstract). A control system 10 detects the change in resistance in the conductive rubber layer 24 when an impact occurs. The impact sensor is accommodated in a trim molding 20 that is secured to a vehicle bumper 1 and side structure 2 (see Fig. 5).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Demachi et al. (JP 09136597) in view of Pong et al. (US 4,951,985) and Fujitani et al. (US 4,258,100). Demachi et al. lacks a conductive material that is foamed. Pong et al. teaches an impact sensor including a conductive foam layer 16 (see column 3, lines 9-15). Fujitani et al. teaches a conductive layer 1 that is foamed (see column 2, lines 43-49; column 3, lines 50-51). From these teachings of Pong et al. and Fujitani et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Demachi et al. by forming the conductive layer from a foamed material because this enhances the protective function of the trim layer (i.e., the layer can be made thicker and more energy-absorbent by virtue of the foam).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Demachi et al. (JP 09136597) in view of Zoratti et al. (WO 01/23224). Demachi et al. fails to teach using the impact sensor to detect a pedestrian impact. Zoratti et al. teaches an impact sensor 38 mounted on a bumper 28 for detecting a pedestrian impact (see page 6, lines 5-7). From this teaching of Zoratti et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Demachi et al. by using the impact sensor to detect a pedestrian impact in order to protect a pedestrian who is struck by a vehicle.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yukishige et al. and Harden et al. teach impact sensors including conductive layers


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whose electrical resistance changes under compression. Meyer et al. teaches an impact sensor accommodated in a trim molding.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 571-272-6671. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Peter C. English
Primary Examiner
Art Unit 3616
4/25/05

pe
25 April 2005